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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,745	12/14/2001	Essam Sourour	040071-482	8805
42015	7590	11/13/2006	EXAMINER	
POTOMAC PATENT GROUP, PLLC P. O. BOX 270 FREDERICKSBURG, VA 22404			TAYLOR, BARRY W	
			ART UNIT	PAPER NUMBER
			2617	

DATE MAILED: 11/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/017,745

Applicant(s)

SOUROUR ET AL.

Examiner

Barry W. Taylor

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 2 and 5-12 is/are allowed.
- 6) ☒ Claim(s) 3 and 4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The drawings were received on 9/10/06. These drawings are accepted and approved by Examiner.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Madhow et al (6,175,587 hereinafter Madhow) cited several times in Applicants submitted 1449 disclosures in view of Moshavi et al (6,996,159 hereinafter Moshavi).

Regarding claim 3. Madhow teaches a method for eliminating multiple-access interference for a user of a CDMA system wherein the orthogonal component of the

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user's Walsh code is calculated with respect to the plane defined by the codes of the interfering paths.

Madhow does not explicitly show obtaining interfering component to be subtracted out (see difference between Applicants admitted prior art (i.e. figures 1-3 and 7) and Applicants figure 6 (i.e. item 510---interference calculation and subtraction)).

Moshavi not only cites Madhow invention but improves on prior art by using estimations of interference signals to be subtracted out from the RAKE receiver thereby improving on signal detection and power consumption (title, abstract, col. 2 lines 1-21, col. 2 lines 49-67, col. 3 lines 15-47, col. 4 lines 35-67, col. 5 line 8 – col. 6 line 67, col. 7 lines 19-30).

It would have been obvious for any one of ordinary skill in the art at the time of the invention to utilize the teachings of Moshavi into the teachings of Madhow in order to provide an inexpensive mobile communication unit with improved signal detection thereby increasing coverage area of the mobile phone as disclosed by Moshavi (col. 2 lines 1-21).

Regarding claim 4. Madhow does not show combiner (406 figure 4) using interference information.

Moshavi not only cites Madhow invention but improves on prior art by using estimations of interference signals to be subtracted out from the RAKE receiver thereby improving on signal detection and power consumption (title, abstract, col. 2 lines 1-21, col. 2 lines 49-67, col. 3 lines 15-47, col. 4 lines 35-67, col. 5 line 8 – col. 6 line 67, col. 7 lines 19-30).

It would have been obvious for any one of ordinary skill in the art at the time of the invention to utilize the teachings of Moshavi into the teachings of Madhow in order to provide an inexpensive mobile communication unit with improved signal detection thereby increasing coverage area of the mobile phone as disclosed by Moshavi (col. 2 lines 1-21).

***Allowable Subject Matter***

3. Claims 1-2 and 5-12 allowed.

***Response to Arguments***

4. Applicant's arguments filed 9/10/06 have been fully considered but they are not persuasive.

a) Applicants generally argue that Moshavi says nothing about using phase information of path signals, e.g., from despreaders, to determine an interfering component to be subtracted out (see page 7, paper dated 9/10/06).

The Examiner disagrees. Moshavi not only cites Madhow invention but improves on prior art by using estimations of interference signals to be subtracted out from the RAKE receiver thereby improving on signal detection and power consumption (title, abstract, col. 2 lines 1-21, col. 2 lines 49-67, col. 3 lines 15-47, col. 4 lines 35-67, col. 5 line 8 – col. 6 line 67, col. 7 lines 19-30).

It would have been obvious for any one of ordinary skill in the art at the time of the invention to utilize the teachings of Moshavi into the teachings of Madhow in order to provide an inexpensive mobile communication unit with improved signal detection

thereby increasing coverage area of the mobile phone as disclosed by Moshavi (col. 2 lines 1-21).

### ***Conclusion***

**5. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barry W. Taylor, telephone number (571) 272-7509, who is available Monday-Thursday, 6:30am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost, can be reached at (571) 272-7872. The central facsimile phone number for this group is **571-273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 2600 receptionist whose telephone number is (571) 272-2600, the 2600 Customer Service telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Centralized Delivery Policy: For patent related correspondence, hand carry deliveries must be made to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), and facsimile transmissions must be sent to the central fax number (571-273-8300).

Barry W. Taylor  
Art Unit 2617



BARRY TAYLOR  
PRIMARY EXAMINER

Approved BUT  
11/4/06

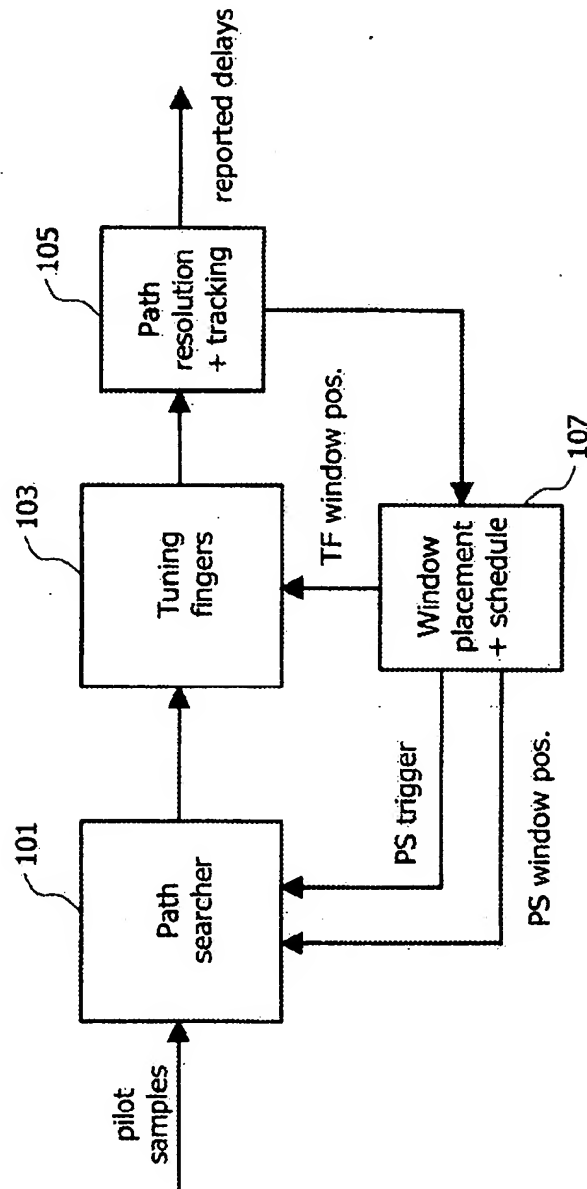


FIG. 1

PRIOR ART



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REPLACEMENT SHEET

Approved  
 GWT 11/4/06

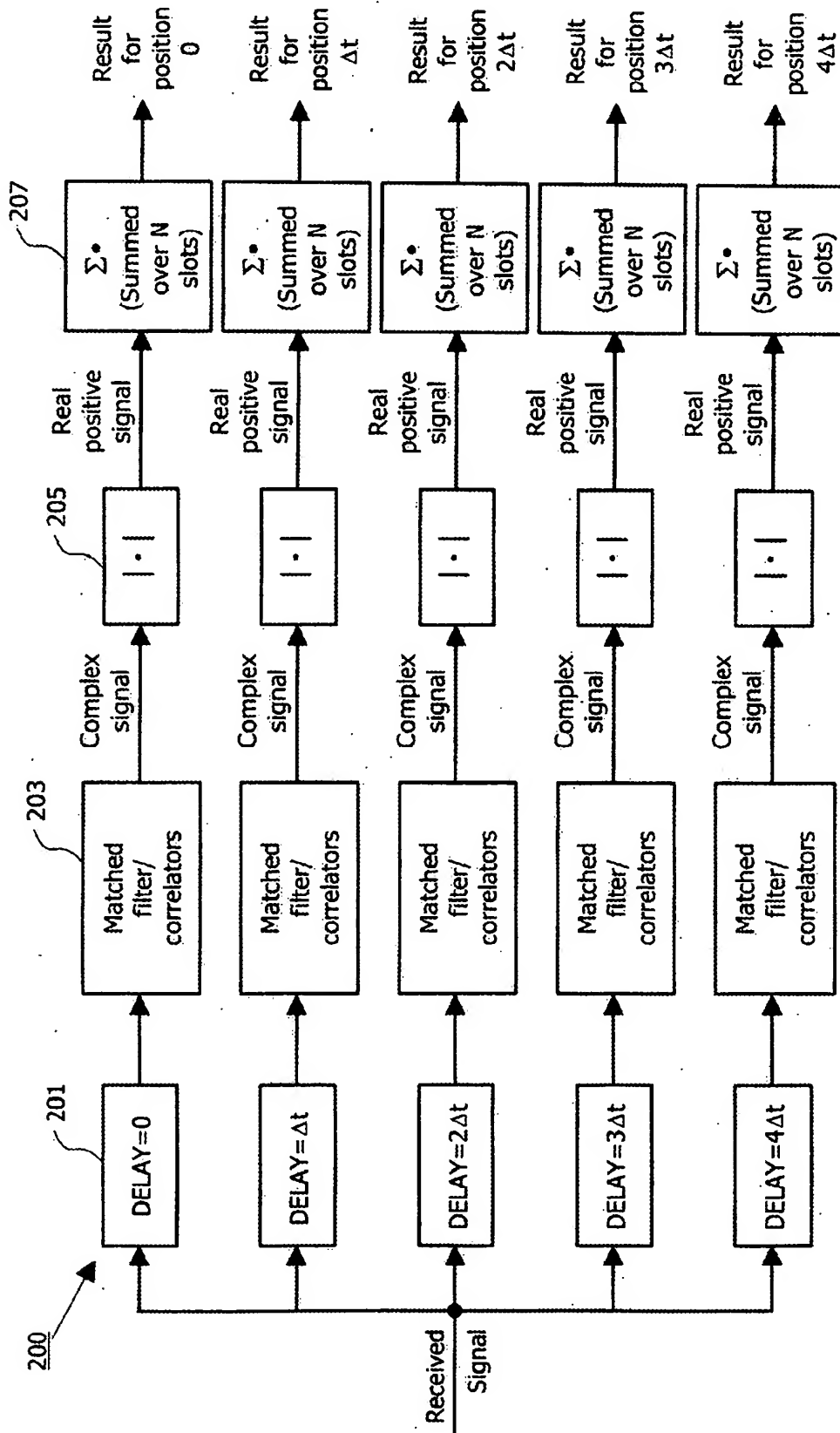


FIG. 2

PRIOR ART

Approved  
BST 11/4/06

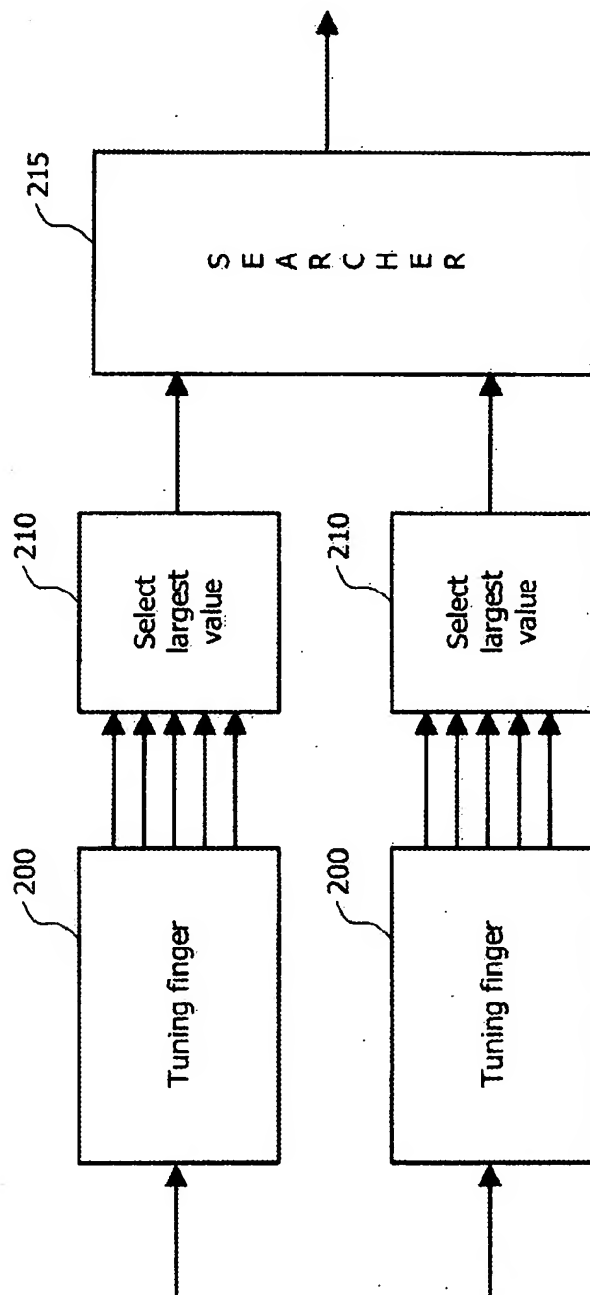


FIG. 3

PRIOR ART

REPLACEMENT SHEET

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 BWT 11/4/06

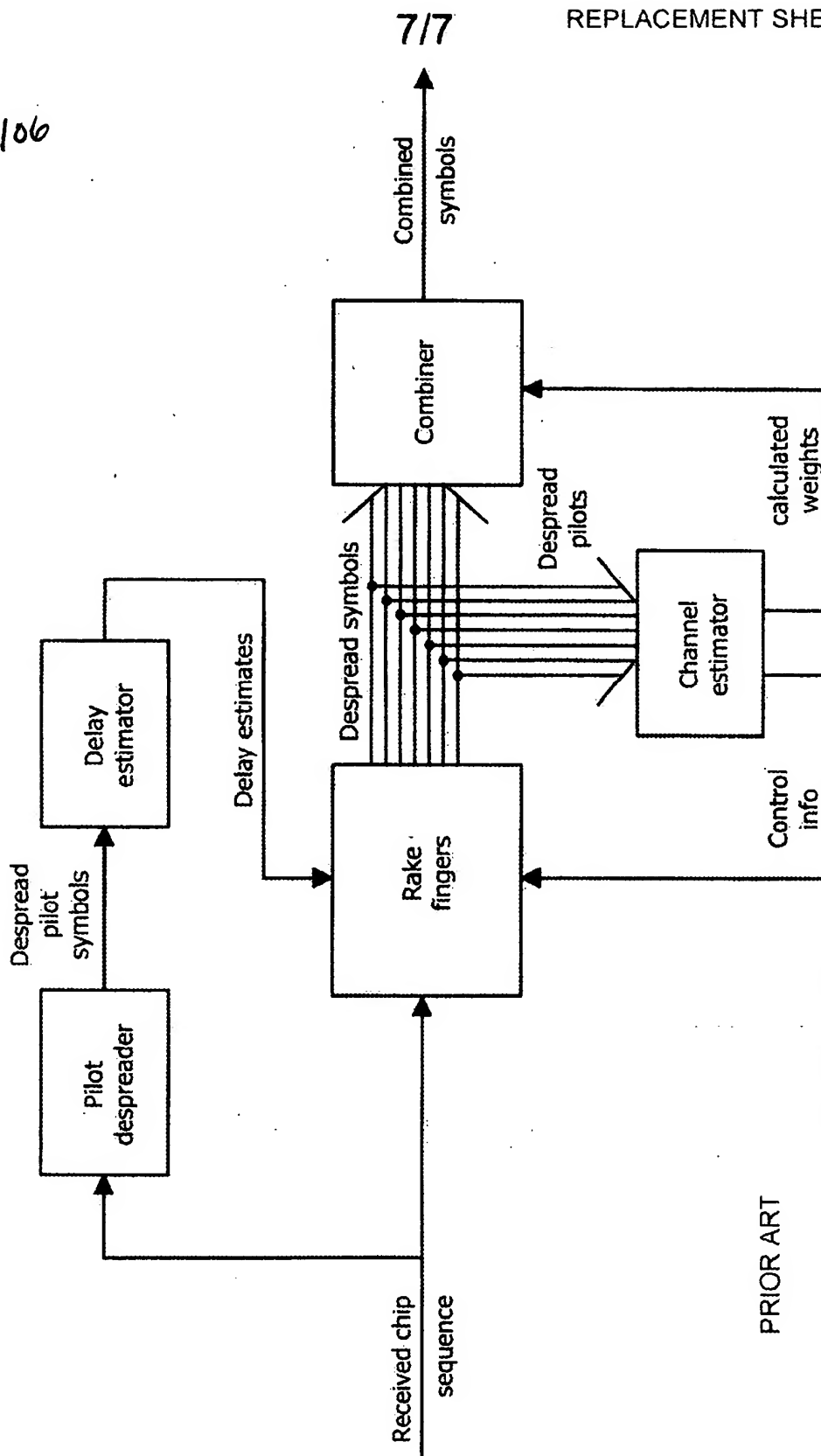


FIG. 7

PRIOR ART